

This Experience Rating Plan is designed and its rating parameters have been calculated using experience for basic limits Bodily Injury Liability (BI), Personal Injury Protection (PIP), and Property Damage Liability (PDL). Premises and operations liability is also included for garage risks. Therefore, the premiums and losses used in deriving the experience modification for any risk under this Plan should include data from only these coverages.

A. ELIGIBILITY

The term risk as used in this Plan means the exposures of any one insured which are to be rated. Allied or subsidiary interests shall not be included unless:

1. The insured holds a majority financial interest therein, or
2. The following conditions exist under an exclusive franchise arrangement between the franchise grantor and the other interests to be rated:
 - a. all interests operate under a common trade name, and
 - b. all interests use one or more identical products or services obtained through the franchise grantor, and
 - c. one source establishes and maintains standards regarding management control and is responsible for insurance premium payment for all interests operating under the exclusive franchise, and
 - d. there is no legal prohibition against ownership by the franchise grantor of the operations of the other interests to be rated.

Expenses other than allocated loss adjustment expenses are not taken into consideration in the parameters of this Plan.

Any risk meeting the following qualifications for the BI, PIP, and PDL exposure to be rated shall be eligible for the application of this Plan:

- (1) Five or more private passenger or commercial automobiles, one or more taxicabs, three or more public automobiles of any other type, or five or more plates of any type for risks which include registration plates not issued for a specific automobile such as garage risks, or the equivalent of such exposures for automobiles hired by the risk, or
- (2) Annual basic limits manual premium of at least \$2,500, including premises and operations premium, for garage risks not subject to the Massachusetts Compulsory Law, or for employers non-ownership

liability exposure. Note that the headquarters location of the risk shall govern the application of this Plan for all employers non-ownership liability exposures regardless of location.

B. EXPERIENCE MODIFICATION

The experience modification for the risk shall be determined in accordance with the experience rating procedure described herein and shall be applied to the total current manual premium, including all increased limits, and premises and operations for garage risks for the BI, PIP, and PDL coverages on the policy being rated.

C. EXPERIENCE USED

The experience modification shall be determined, by the company establishing the rating, from the latest available three completed policy years of experience incurred in this state, or in all states by the risk. In the event the experience for the full experience period is not available, at least two completed policy years shall be used. Risks with less than two completed policy years of experience shall not be experience rated. The experience period shall end at least six months prior to the rating date.

Experience developed by companies other than the company establishing the modification or self-insured experience may be used subject to the periods specified above. If the risk has been self-insured or insured with a company from which the experience is not obtainable, the experience may be used if submitted to the company in the form of a statement signed by the insured. Experience in such form may be excluded from the rating if its reliability can not be established.

D. DETERMINATION OF EXPERIENCE MODIFICATION

The term basic limits shall mean \$20,000/40,000 BI, \$8,000 PIP, and \$5,000 PDL.

1. Total Basic Limits Premium Subject to Experience Rating

The premiums to be included in the rating are calculated as follows:

- a. Determine the current annual basic limits premium for BI, PIP and PDL for the policy being rated using CAR's current manual rates. The policy being rated is the policy to which the experience modification of D.6. of this Section shall apply.

- b. The annual basic limits premium for each year of the experience period is the annual basic limits premium determined according to D.1.a. of this Section, multiplied by the appropriate detrend factor from Table A of this Section.

Liability Experience Rating Plan Factors
Table A – Premium Detrend Factors

	<u>Latest Year</u>	^{2nd} <u>Latest Year</u>	^{3rd} <u>Latest Year</u>
Taxi	0.926	0.892	0.858
All Other	0.924	0.889	0.855

- c. The total basic limits premium subject to experience rating is equal to the sum of the detrended annual basic limits premiums calculated according to D.1.b. of this Section.
- d. If exposures have changed during the experience period, refer to the supplement to determine if an alternative rating methodology is in order.

2. Basic Limits Losses Subject to Experience Rating

The losses to be included in the rating shall be the total of the following:

- a. Paid and outstanding losses, including allocated loss adjustment expense (ALAE) for each year in the experience period, with the indemnity amount limited to basic limits, and with the amount of indemnity and allocated loss adjustment expense resulting from any single occurrence limited by the maximum single loss (MSL) value specified in Table C of this Section based on the total basic limits premium subject to experience rating.

Property damage losses and ALAE from the experience period shall be adjusted to the deductible basis, if any, that applies for the policy being rated.

- b. Adjustment to reflect ultimate level of losses for each year in the experience period, is calculated by multiplying the annual basic limits premium from D.1.b. of this Section for the year by the adjusted expected loss ratio (AELR) and by the appropriate basic limits loss development factor (LDF). The formula for this adjustment is $P \times AELR \times LDF$, where
- (1) P is the annual basic limits premium for the particular year in the experience period from D.1.b. of this Section.

- (2) AELR is the adjusted expected loss ratio specified in Table C of this Section based on the total basic limits premium subject to experience rating from D.1.c. of this Section. If a risk includes more than one vehicle type, then the AELR from Table C of this Section should be the AELR for the predominant class of risk on the policy.
- (3) LDF is the appropriate CAR basic limits loss development factor from Table B of this Section.

Liability Experience Rating Plan Factors
Table B – Loss Development Factors

	<u>Latest</u>		<u>2nd</u> <u>Latest</u> <u>Year</u>		<u>3rd</u> <u>Latest</u> <u>Year</u>		<u>Factors for</u> <u>Immature</u> <u>Years*</u>	
	Taxi	All Other	Taxi	All Other	Taxi	All Other	Taxi	All Other
Maturity (Months)	18	18	30	30	42	42	6	6
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.504	0.586
Maturity (Months)	21	21	33	33	45	45	9	9
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.235	0.327
Maturity (Months)	24	24	36	36	48	48	12	12
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061
Maturity (Months)	27	27	39	39	51	51	15	15
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

- * In cases where an insured has changed carriers, the company establishing the rating may be unable to obtain current valuations of past losses from previous carriers. Therefore losses may be evaluated at less than 18 months.

The maturity of the losses for any year in the experience period is defined as the number of months between the latest loss valuation and the effective date of the policy to which these losses are assignable.

3. Actual Loss Ratio

Determine the actual loss ratio (ALR) by dividing the basic limits losses subject to experience rating from D.2.a. and D.2.b. of this Section by the total basic limits premium subject to experience rating from D.1.c. of this Section.

4. Credibility

The credibility for the risk is obtained from Table C of this Section, based on the total basic limits premium subject to experience rating.

5. Adjusted Expected Loss Ratio

The AELR for the risk is obtained from Table C of this Section based on the total basic limits premium subject to experience rating. If a risk includes more than one vehicle type, then the AELR from Table C of this Section should be the AELR for the predominant class of risk on the policy.

6. Experience Modification

$$\frac{\text{ALR} - \text{AELR}}{\text{AELR}} \times \text{CREDIBILITY} = \text{EXPERIENCE MODIFICATION}$$

If the experience modification is negative, it is a credit; if positive, it is a debit.

LIABILITY EXPERIENCE RATING PLAN EXAMPLE

I. Basic Information

Assume the policy to be rated is effective 11/01/23 – 10/31/24 for private passenger type vehicles.

Assume the basic limits premium for BI, PIP, and PDL using CAR rates effective 11/01/23 is \$25,000.

Assume the losses and ALAE for three years, evaluated as of 11/01/23, are as follows:

<u>Year</u> (1)	<u>Maturity</u> (2)	<u>Total Limits Losses</u> (3)	<u>Basic Limits Losses</u> (4)	<u>ALAE</u> (5)	<u>Basic Limits Losses & ALAE (4) + (5)</u> (6)
11/01/19-10/31/20	48	\$ 1,500 500 100,000	\$ 1,500 500 20,000	\$ 500 100 20,000	\$ 2,000 600 40,000
11/01/20-10/31/21	36	750 250	750 250	100 50	850 300
11/01/21-10/31/22	24	250 500 22,250	250 500 20,000	50 700 5,000	300 1,200 25,000

II. Total Basic Limits Premium Subject to Experience Rating (See D.1. of this Section)

<u>Year</u>	<u>Annual Basic Limits Premium</u>	<u>Table A Detrend Factors</u>	<u>Basic Limits Premium Subject to Experience Rating</u>
(1)	(2)	(3)	(4)
3 rd Latest Year	\$ 25,000	0.855	\$ 21,375
2 nd Latest Year	25,000	0.889	22,225
Latest Year	25,000	0.924	23,100
			<u>\$ 66,700</u>

From Table C of this Section, given the total basic limits premium subject to experience rating of \$66,700, the credibility is 0.27, the AELR is 0.646, and the MSL is \$36,802. (See D.1., 2. and 3. of this Section)

III. Basic Limits Losses Subject to Experience Rating

A. Paid and Outstanding Losses & ALAE (See D.2. of this Section)

<u>Year</u>	<u>Basic Limits Losses & ALAE</u>	<u>Basic Limits Losses & ALAE Subject to MSL of \$36,802</u>
(1)	(2)	(3)
11/01/19 – 10/31/20	\$ 2,000	\$ 2,000
	600	600
	40,000	36,802
11/01/20 – 10/31/21	850	850
	300	300
11/01/21 – 10/31/22	300	300
	1,200	1,200
	25,000	25,000
		<u>\$ 67,052</u>

B. Adjustment to Reflect the Ultimate Level of Losses (See D.2. of this Section)

<u>Year</u> (1)	<u>Maturity</u> (2)	Premium Subject To Experience Rating <u>(Step II)</u> (3)	<u>AELR</u> <u>(Step II)</u> (4)	<u>Table B</u> <u>LDF</u> (5)	Adjustment to Reflect Ultimate Level of Losses <u>(3) x (4) x (5)</u> (6)
11/01/19 – 10/31/20	48	\$ 21,375	0.646	0.000	\$ 0
11/01/20 – 10/31/21	36	22,225	0.646	0.000	0
11/01/21 – 10/31/22	24	<u>23,100</u>	0.646	0.000	<u>0</u>
		\$ 66,700			\$ 0

IV. Experience Modification

Credibility (Step II)	0.27
Adjusted Expected Loss Ratio (Step II)	0.646
Basic Limits Losses Subject to Experience Rating (\$67,052 + \$ 0) (Step III)	\$ 67,052
Basic Limits Premium (Step II)	\$ 66,700
Actual Loss Ratio (\$67,052/66,700)	1.005

$$\text{Experience Modification} = \frac{1.005 - 0.646}{0.646} \times 0.27 = 0.150 \text{ (factor of 1.150) or a 15.0\% debit}$$

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
1,500 -	6,640	0.03	0.558	0.513	0.552	20,000
6,641 -	8,627	0.04	0.574	0.528	0.568	21,783
8,628 -	10,655	0.05	0.585	0.538	0.579	23,044
10,656 -	12,727					
		0.06	0.593	0.545	0.586	24,001
12,728 -	14,844	0.07	0.599	0.551	0.593	24,827
14,845 -	17,007	0.08	0.605	0.556	0.598	25,544
17,008 -	19,218	0.09	0.609	0.560	0.602	26,196
19,219 -	21,478	0.10	0.613	0.564	0.606	26,826
21,479 -	23,789	0.11	0.617	0.567	0.610	27,413
23,790 -	26,153	0.12	0.620	0.571	0.614	28,000
26,154 -	28,572	0.13	0.624	0.573	0.617	28,565
28,573 -	31,047	0.14	0.627	0.576	0.620	29,130
31,048 -	33,580	0.15	0.629	0.579	0.622	29,673
33,581 -	36,175	0.16	0.632	0.581	0.625	30,238
36,176 -	38,832	0.17	0.634	0.583	0.627	30,803
38,833 -	41,554	0.18	0.637	0.585	0.629	31,368
41,555 -	44,344	0.19	0.639	0.587	0.632	31,933
44,345 -	47,204	0.20	0.641	0.589	0.634	32,498
47,205 -	50,138	0.21	0.643	0.591	0.635	33,085
50,139 -	53,148	0.22	0.645	0.593	0.637	33,694
53,149 -	56,236	0.23	0.646	0.594	0.639	34,281
56,237 -	59,406	0.24	0.648	0.596	0.641	34,890
59,407 -	62,660	0.25	0.650	0.598	0.643	35,520
62,661 -	66,002	0.26	0.652	0.599	0.644	36,150
66,003 -	69,437	0.27	0.653	0.601	0.646	36,802
69,438 -	72,969	0.28	0.655	0.602	0.648	37,454
72,970 -	76,600	0.29	0.656	0.604	0.649	38,128
76,601 -	80,337	0.30	0.658	0.605	0.651	38,824
80,338 -	84,183	0.31	0.660	0.607	0.652	39,520
84,184 -	88,142	0.32	0.661	0.608	0.654	40,237

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
88,143 -	92,220	0.33	0.663	0.609	0.655	40,976
92,221 -	96,424	0.34	0.664	0.611	0.657	41,737
96,425 -	100,757	0.35	0.666	0.612	0.658	42,498
100,758 -	105,226	0.36	0.667	0.614	0.660	43,302
105,227 -	109,838	0.37	0.669	0.615	0.661	44,106
109,839 -	114,599	0.38	0.670	0.616	0.663	44,936
114,600 -	119,519	0.39	0.672	0.618	0.664	45,801
119,520 -	124,606	0.40	0.673	0.619	0.665	46,671
124,607 -	129,865	0.41	0.674	0.620	0.667	47,584
129,866 -	135,307	0.42	0.676	0.621	0.668	48,497
135,308 -	140,942	0.43	0.677	0.622	0.669	49,475
140,943 -	146,779	0.44	0.678	0.623	0.671	50,453
146,780 -	152,832	0.45	0.679	0.625	0.672	51,475
152,833 -	159,110	0.46	0.680	0.626	0.673	52,518
159,111 -	165,627	0.47	0.681	0.627	0.674	53,605
165,628 -	172,397	0.48	0.682	0.627	0.675	54,735
172,398 -	179,436	0.49	0.683	0.628	0.676	55,887
179,437 -	186,758	0.50	0.684	0.629	0.676	57,104
186,759 -	194,382	0.51	0.685	0.629	0.677	58,343
194,383 -	202,328	0.52	0.685	0.630	0.678	59,647
202,329 -	210,616	0.53	0.686	0.631	0.678	60,973
210,617 -	219,268	0.54	0.686	0.631	0.679	62,386
219,269 -	228,308	0.55	0.687	0.632	0.679	63,842
228,309 -	237,765	0.56	0.688	0.632	0.680	65,342
237,766 -	247,668	0.57	0.688	0.633	0.680	66,929
247,669 -	258,046	0.58	0.689	0.633	0.681	68,581
258,047 -	268,937	0.59	0.689	0.634	0.682	70,298
268,938 -	280,380	0.60	0.690	0.634	0.682	72,124
280,381 -	292,417	0.61	0.690	0.635	0.683	74,015
292,418 -	305,096	0.62	0.691	0.635	0.683	75,993

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
305,097 - 318,471	318,471	0.63	0.691	0.636	0.684	78,080
318,472 - 332,597	332,597	0.64	0.692	0.636	0.684	80,275
332,598 - 347,544	347,544	0.65	0.692	0.637	0.685	82,601
347,545 - 363,382	363,382	0.66	0.693	0.637	0.685	85,057
363,383 - 380,197	380,197	0.67	0.693	0.637	0.685	87,644
380,198 - 398,079	398,079	0.68	0.694	0.638	0.686	90,405
398,080 - 417,134	417,134	0.69	0.694	0.638	0.686	93,318
417,135 - 437,478	437,478	0.70	0.694	0.638	0.687	96,426
437,479 - 459,251	459,251	0.71	0.695	0.639	0.687	99,730
459,252 - 482,609	482,609	0.72	0.695	0.639	0.687	103,317
482,610 - 507,731	507,731	0.73	0.695	0.639	0.688	107,078
507,732 - 534,822	534,822	0.74	0.696	0.640	0.688	111,165
534,823 - 564,124	564,124	0.75	0.696	0.640	0.688	115,556
564,125 - 595,917	595,917	0.76	0.696	0.640	0.688	120,316
595,918 - 630,539	630,539	0.77	0.696	0.640	0.689	125,468
630,540 - 668,379	668,379	0.78	0.697	0.640	0.689	131,076
668,380 - 709,914	709,914	0.79	0.697	0.641	0.689	137,206
709,915 - 755,709	755,709	0.80	0.697	0.641	0.689	143,923
755,710 - 806,450	806,450	0.81	0.697	0.641	0.689	151,335
806,451 - 862,995	862,995	0.82	0.697	0.641	0.690	159,552
862,996 - 926,395	926,395	0.83	0.698	0.641	0.690	168,682
926,396 - 997,972	997,972	0.84	0.698	0.642	0.690	178,942
997,973 - 1,079,420	1,079,420	0.85	0.698	0.642	0.690	190,506
1,079,421 - 1,172,939	1,172,939	0.86	0.698	0.642	0.690	203,679
1,172,940 - 1,281,416	1,281,416	0.87	0.698	0.642	0.691	218,786
1,281,417 - 1,408,760	1,408,760	0.88	0.698	0.642	0.691	236,306
1,408,761 - 1,560,360	1,560,360	0.89	0.699	0.642	0.691	256,891
1,560,361 - 1,743,877	1,743,877	0.90	0.699	0.642	0.691	281,367
1,743,878 - 1,970,579	1,970,579	0.91	0.699	0.642	0.691	311,017
1,970,580 - 2,257,733	2,257,733	0.92	0.699	0.642	0.691	347,623

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	<u>Single Loss</u>
2,257,734 -	2,633,237	0.93	0.699	0.642	0.691	394,010
2,633,238 -	3,145,291	0.94	0.699	0.643	0.691	454,657
3,145,292 -	3,884,927	0.95	0.699	0.643	0.691	537,346
3,884,928 -	5,047,205	0.96	0.699	0.643	0.691	656,792
5,047,206 -	7,139,307	0.97	0.699	0.643	0.691	844,493
7,139,308 -	12,020,880	0.98	0.699	0.643	0.691	1,182,355
12,020,881-	36,428,755	0.99	0.699	0.643	0.691	1,970,700
36,428,756	and Over	1.00	0.699	0.643	0.691	5,912,383